

Amended Claims

1. A method of increasing the capacity for secretory protein synthesis in general (i.e. not restricted to PR genes), the method comprising causing a plant to maintain in
5 at least a part of the plant a level of BiP, or a homologue thereof, which is greater than the endogenous level for said plant in non-stressful conditions.
2. A method according to claim 1 of reducing the period within which the plant's natural defence mechanism responds to attack by a plant pathogen.
- 10 3. A method according to either claim 1 or 2 wherein the maintained level of BiP, or a homologue thereof, is at least three times said endogenous level.
4. A method according to claim 3 wherein said maintained level is at least five
15 times said endogenous level.
5. A method according to any preceding claim wherein said maintained level is effected by over expression of BiP, or a homologue thereof, by means of a chimeric gene containing a strong constitutive promoter, a coding region for BiP or a
20 homologue thereof and a 3' untranslated end containing a stop sequence.
6. A method according to any of claims 1 to 4 wherein said maintained level is effected by over expression of calreticulin, or a homologue thereof, by means of a chimeric gene containing a strong constitutive promoter, a coding region for
25 calreticulin or a homologue thereof and a 3' untranslated end containing a stop sequence.
7. A method according to any of claims 1 to 4 wherein said maintained level is effected by over expression of the ATPase domain of BiP, or a homologue thereof, and an ER retention signal by means of a chimeric gene containing a strong
30 constitutive promoter, a coding region for the ATPase domain of BiP, or a homologue thereof, and for an ER retention signal and a 3' untranslated end containing a stop sequence.
- 35 8. A method according to any of claims 1 to 4 wherein said maintained level is effected by modifying signal transduction pathways leading to BiP induction.

9. A method according to any of the preceding claims wherein the plant is additionally treated with salicylic acid

10. A modified plant which maintains, in at least a part thereof, a level of BiP, or a homologue thereof, of at least a three times greater than the level maintained in said part by an unmodified plant of the same species in non-stressful conditions.

11. A modified plant according to claim 10 wherein the BiP level is at least five times greater than the level maintained by an unmodified plant of the same species in non-stressful conditions.

12. Use of salicylic acid in combination with over expression of BiP or a homologue thereof to protect a plant against pathogen attack.

13. A modified plant or plant cells with a level of BiP, or a homologue thereof, which is at least three times greater than the endogenous level of the plant or plant cells in non-stressful conditions, produced by the method of the present invention.

14. A modified plant or plant cells according to claim 13 wherein the BiP level is at least five times greater than the endogenous level of the plant or plant cells in non-stressful conditions.

25

P15578woamendedclaims